As people around the world prepare to repopulate their workplaces, safety has emerged as a consistent theme. When focusing on safety there is a spectrum of factors to consider including cost, maintenance, and environmental quality. As we redefine the workplace, it is also important to ask how we might balance those safety factors with other integral elements: flexibility, control, comfort, collaboration, and innovation.
MATERIALS

• Per the Center for Health Design, prioritize infection control in design elements:
  • Use flush surfaces.
  • Reduce the use of textured finishes.
  • Eliminate joints or seams when possible.
  • Use non-porous, durable, and cleanable materials.
  • Minimize or eliminate joints and seams and reduce the variety of materials used in a space to simplify cleaning.
• Map out high-touch surfaces (i.e. door handles, monitors, etc.) and work with an Occupational Hygienist to create an appropriate cleaning protocol for each material or surface. Clearly illustrate and streamline the cleaning process and priorities with the maintenance team, keeping in mind that turnover may be common.
• Specify durable, coated fabrics that can withstand repeated cleaning of the chemicals approved by the EPA.
• Approach anti-microbial materials with caution and only as a supplementary strategy. The CDC does not recommend all anti-microbial materials as some can have toxic effects on human health. Germs can and do still live on anti-microbial surfaces, as well as surfaces that have an anti-microbial treatment, and both still require regular cleaning.

Prioritize infection control in design elements.

IN RESTROOMS:
• Utilize hands-free fixtures in restrooms, including soap dispensers, sinks, toilets, urinals, etc.
• Install automated hand washing units to ensure proper hygiene.
• Remove hand dryers that recirculate air within the same space.

To encourage positive hygiene behavior, consider integration of indicator lighting to signal proper hand washing duration.

When possible, use touchless door openers or touchless hand sanitizer on both sides of doors.
DE-DENSIFICATION

CDC guidelines recommend occupants have six feet of separation.

• Target occupancies should be approximately 50% or less of previous occupancies to allow six feet of separation per CDC guidelines.
• Add cleanable side and front privacy screens to workstations above desk height. At adjustable height desks, attach the screen to the desk.
• Remove half of the chairs from every meeting space using a maximum occupancy of 10 people per room.
  • Move to virtual meetings for all meetings over 10 people.
  • Specific limits will vary based on local regulations.
• Stagger schedules for the time that employees spend in the office.
  • Shifts could be sections during the day or alternating days of the week.
  • Additional shifts may need to be added to accommodate the lower occupancy rates.
  • Clean between shifts.
• For now, stagger the occupied desks to allow six feet of separation between employees.

Employ occupancy limits for collaboration spaces to allow occupants to remain six feet away from other occupants. Maximum occupancy for any collaboration spaces should be no more than 10.
Cues to assist with awareness of social distancing protocols.

- Leverage existing and emerging technology to help draw awareness to maintaining social distancing protocols.
- Use floor graphics to help people visualize the required distance between employees.
- In the short term tape could be used.
- Incorporate additional visual cues on a six-foot module including lighting, acoustic baffles, etc.

Things for your organization to consider:

- How might we preserve our culture and the things that we unknowingly learn from each other while reducing density?
- Could reducing density be an opportunity to enhance focused work?
- What are ways to help those who stay at home feel connected to their team?
- Can safety measures (buffers, protocols, PPE, technology, etc.) be an opportunity for boosting wellness, elevating brand, or enhancing culture in the workplace?
PROTOCOLS

FOR EMPLOYEES:

- Provide training prior to returning to work for staff. Establish a return to work communication plan to convey how the office will function and how spaces will be used differently.
- Provide regular updates to staff regarding protocol improvements, findings, and outcomes.
- Develop a questionnaire to document recent exposure risk, travel, etc.
- Establish a health screening process and education consistent with recommendations provided by the World Health Organization
  - Rules may vary based on local and HIPPA regulations.
  - Consider equipping employees with the tools and training to screen at home.
- Formalize work from home policy and guidelines for health and safety as well as productivity.

FOR VISITORS:

- Utilize electronic signature or scanning of receipt for deliveries. Establish consistent location for deliveries to be dropped and protocols for unpackaging including wait time, usage of PPE, disposal of packaging and cleaning of area.
- Modify guest check in processes to be touch-free.
- Per World Health Organization recommendations, retain the list and contact information of all visitors and meeting participants to assist with contact tracing if necessary.

THINGS FOR YOUR ORGANIZATION TO CONSIDER:

- How might we create a balance between employee privacy and the health of the organization?
- What are ways to grow the culture of the organization as more people work from home?
PROTOCOLS

Provide face masks and guidelines for use per CDC recommendations to all occupants and guests.

Evaluate the acoustics and consider technology options at the desk to balance the needs of those taking calls at the desk and those doing focused work. Consider white noise and/or noise canceling headsets.

Leverage technology to eliminate touching screens, remote, keyboards and other peripherals where possible.

Incorporate educational environmental graphics, such as those developed and shared by the World Health Organization.

Leverage technology—such as a “boarding pass”—on personal devices to scan and open doors.

Install automatic door openers to minimize contact with door handles.

Implement standard circulation patterns to avoid cross traffic.

Education and preventive measures to help reduce the spread of germs in the workplace.
SHARED ITEMS AT FOCUS SPACES

• Per OSHA recommendations, equip each assigned desk with a facial tissue box to eliminate sharing.
• Eliminate shared waste receptacles in the open office, such that each employee has a desk-side trash receptacle.
• Equip employees with dedicated technology (laptop, keyboard, mouse).

THINGS FOR YOUR ORGANIZATION TO CONSIDER:
• How could we allow employee flexibility and control while keeping shared spaces safe?
• How might we reduce employees’ needs to share physical resources with each other?
• How could we share physical resources with each other in a safe way?

Implement assigned seating, or long-term reservations, in lieu of free-address/hotelng workspaces.

Create an employee backpack of dedicated, essential supplies to be used in the touch-free office: laptop, mouse, laser pointer, tissues, anti-bacterial wipes, hand sanitizer, PPE, etc.
SHARED ITEMS AT COLLABORATION SPACES

Reduce contact with frequently touched surfaces and items.

- Integrate voice-activated control of meeting room technology (i.e. Ok Google, Alexa, Siri, Cortona).
- Use personal mobile devices (phones, tablets, laptops) and a space booking application (i.e. Teem, Robin, etc.) to check in to meeting spaces and adjust reservations, rather than interacting with a touch-screen device.
- Use dedicated personal laser pointers or digital laser pointers within meeting software rather than touchscreen technology.
- Remove shareable items from meeting spaces: markers, tissue boxes, etc.
- Use touchless waste receptacles in meeting spaces.
- Use proximity detection (i.e. ultrasonic sounds) to enable one-click, direct screen sharing.
- Transition conference rooms to use cameras that use auto-framing technology: a camera that can detect people in a specific field of view and smoothly zooms in and out on the active speaker(s).
- Transition from table-top wireless microphones in a conference room to a suspended or flush-ceiling microphone that does not require user interaction.
- Use wireless presentation devices that do not require physical user contact and software that can be downloaded on the device to present content. Avoid the use of shared AV peripherals such as HDMI, USB, and Ethernet cables.
- Use individually assigned touch styluses to control interactive, touchscreen displays and any interaction that requires a physical push (i.e. lighting controls, power buttons, copiers, etc.).
- Eliminate the need to pass handheld microphones around the room for audience-centered interactive presentations by using an app-based program, which transforms every smartphone and tablet into a personal microphone via an iOS or Android app.
- Eliminate coat rooms in favor of personal lockers.

THINGS FOR YOUR ORGANIZATION TO CONSIDER:

- What strategies could be used to collaborate effectively without using conventional collaborative tools?
- How might we make it easy for employees to keep shared spaces clean?
- What can be done to rally staff around cleaning spaces/objects they use?
- What can we do to make it easy for employees to track what is clean and what is not?
CLEANING

Education and communication around cleaning.

- Develop list of approved cleansers to be used throughout your space based on regulated standards which are continuing to evolve. We suggest looking at [www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2](http://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2) and cross checking it against the EPA safer choice approved list [www.epa.gov/saferchoice/products](http://www.epa.gov/saferchoice/products).
- Develop regular cleaning schedules and protocols for all shared items and communicate these protocols to staff. Frequency of cleaning will be based on use.
- Implement scheduling tools for use of shared “flexible” spaces and allow for cleaning between users.
- Provide communication at each desk to confirm the last time it had been cleaned.
- Consider installing footwear sanitation stations.
- Develop and implement restroom cleaning protocols in line with the CDC and OSHA guidelines.

**THINGS FOR YOUR ORGANIZATION TO CONSIDER:**

- How do we help employees feel safe?
- What can we do to make high-touch areas obvious for cleaning purposes (e.g. all shared spaces are pink)?
- How might we keep low-touch areas low-touch?
- Should we rally staff around cleaning spaces they use?
INFRASTRUCTURE

Apply simple HVAC and lighting changes to help reduce germ spread.

- Maintaining high occupant spaces in negative pressure spaces will control the spread of an airborne virus. It is not recommended that entire buildings be under a negative pressure as it will lead to infiltration, humidity, and other issues with the envelope.

- Keep HVAC systems running longer, even 24/7 if possible, as recommended by ASHRAE.

- Keep relative humidity between 40-60% to help reduce the risk of infection. This can be achieved by adding either local or global humidification to units. Building envelopes must be designed for higher internal levels to prevent condensation and mold potential.

- Utilize a Bipolar Ionization system. This can be retrofitted to existing building systems or spaces. Works against 99% of bacteria and viruses.

- Change air filters to high performing HEPA, activated charcoal, or MERV 14 or greater. (Note: existing systems may not be able to handle additional static pressure loss from increased filtration.)

- Add independent air circulators with high performance air filters (HEPA) to the space. Effective units will operate at 20-30 air changes per hour.

- Increase ventilation rates to bring in a higher percentage of outside air. Reducing the amount of recirculated air will provide a lower chance of potential transfer. (Note: most building systems are not capable of delivering higher levels of outside air at required thermal conditions.)

- Use UVC lighting to sterilize air. This is ONLY appropriate inside air handling units. (Note: UVC wands and other residential tools are non-regulated and may pose a safety hazard.)

- GUV (Germicidal Ultraviolet) disinfection lighting can be evaluated for surface sensitive areas of the workplace, such as fitness and food service.

- These luminaries often have two settings, a regular level and disinfection level, although this is a supplement to cleaning, not a substitute. The cost-benefit energy implications, as well as overall effectiveness to targeted disinfection rates, need to be evaluated.

- Sunlight has a high GUV effect and introducing access to sunlight within your workspace can result in wellness benefits as well as take advantage of the inherit properties of sunlight disinfection.

- Evaluate the use of personal devices to control lighting and AV systems. This allows for individuals to control their environment, as well as encourages less frequent use of wall switches or public control devices.

- Change air filters to high performing HEPA, activated charcoal, or MERV 14 or greater. (Note: existing systems may not be able to handle additional static pressure loss from increased filtration.)

- Add independent air circulators with high performance air filters (HEPA) to the space. Effective units will operate at 20-30 air changes per hour.

- Increase ventilation rates to bring in a higher percentage of outside air. Reducing the amount of recirculated air will provide a lower chance of potential transfer. (Note: most building systems are not capable of delivering higher levels of outside air at required thermal conditions.)

THINGS FOR YOUR ORGANIZATION TO CONSIDER:

- How might we make people feel they are in control of their health and not their health in control of them?


